## **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

| 10/539.834 |
|------------|
| P.T.       |
| 3/14/06    |
|            |

## ENTERED



PC1

PATENT APPLICATION: US/10/539,834 TIME: 11:06:02

Input Set: A:\10539834.txt
Output Set: N:\CRF4\03142006\J539834.raw

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3 <110> APPLICANT: National Institute of Advanced Industrial Science and Technology
             Hisashi NARIMATSU
             Takashi KUDO
     5
             Akira TOGAYACHI
      6
             Toru HIRUMA
      7
     9 <120> TITLE OF INVENTION: GLYCOSYLTRANSFERASE, NUCLEIC ACID ENCODING THE
GLYCOSYLTRANSFERASE
             AND METHOD OF TESTING CANCERATION USING THE NUCLEIC ACID
    10
    12 <130> FILE REFERENCE: 159-89 / YCT-902
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     14 <140 > CURRENT APPLICATION NUMBER: US 10/539,834
C--> 15 <141> CURRENT FILING DATE: 2005-06-17
     17 <150> PRIOR APPLICATION NUMBER: PCT/JP03/17030
     18 <151> PRIOR FILING DATE: 2003-12-26
     20 <150> PRIOR APPLICATION NUMBER: JP 380975/2002
    21 <151> PRIOR FILING DATE: 2002-12-27
     23 <160> NUMBER OF SEQ ID NOS: 20
     25 <210> SEQ ID NO: 1
     26 <211> LENGTH: 1194
     27 <212> TYPE: DNA
     28 <213> ORGANISM: Homo sapiens
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     31 atgegetgee ceaagtgeet tetetgeetg teageactge teacacteet gggeeteaaa 60
     32 gtgtacatcg agtggacatc cgagtcccgg ctcagcaagg cctaccccag ccctcggggc 120
     33 acccegecaa gececaegee agecaaecet gageceaece tacetgecaa cetetecaee 180
     34 cgcctgggcc agactatccc gctgcccttt gcttactgga accagcagca gtggcggctg 240
     35 gggtccctgc ccagtgggga cagcactgaa acggggggct gccaggcttg gggggccgcc 300
     36 gccgccaccg agatecetga ettegeetee taccecaagg aceteegeeg ettettgetg 360
     37 tcaqcaqcct gccggagctt cccacagtgg ctgcctggag gtggtggcag ccaagtctcc 420
     38 agetgeteag atactgatgt eccetacetg etgttggeeg teaagteaga accagggege 480
     39 tttgcagaac gacaggccgt gagagagacg tggggcagtc cagctccagg gatccggctg 540
     40 ctcttcctgc tagggtctcc ggtgggtgag gcggggcctg acctagactc actagtggcc 600
     41 tgqqaqaqcc gtcgctacag tgacctgctg ctctgggact tcctcgacgt cccattcaac 660
     42 cagacgetea aagacetget getgetggee tggetgggee gecaetgeee cacegtgagt 720
     43 tttgtcttgc gagctcagga cgatgccttt gtacacccc ctgccctgct ggctcacctg 780
     44 egggeeetge cacctgeete ggeeegaage etetacetgg gtgaggtett tacceaggee 840
     45 atgectetee ggaageeagg aggaceette tatgtgeeeg agteettett egaaggtgge 900
     46 tacccagect atgeaagegg gggtggetae gteattgeeg ggegeetgge accetggetg 960
     47 ctgcgggcgg cagcccgtgt ggcacccttc ccctttgagg acgtctacac tggcctttgc 1020
     48 atccgagece tgggcetggt geeceaggee cacceagget tecteacage etggecagea 1080
     49 gaccgcactg cggaccactg tgctttccgc aacctgctgc tggtacggcc cctgggcccc 1140
    50 caggocagca ttcggctctg gaaacaactg caagacccaa ggctccagtg ctga
    52 <210> SEQ ID NO: 2
    53 <211> LENGTH: 397
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54 <212> TYPE: PRT

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PATENT APPLICATION: US/10/539,834 TIME: 11:06:03

Input Set : A:\10539834.txt

Output Set: N:\CRF4\03142006\J539834.raw

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58 Met Arg Cys Pro Lys Cys Leu Leu Cys Leu Ser Ala Leu Leu Thr Leu
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60 Leu Gly Leu Lys Val Tyr Ile Glu Trp Thr Ser Glu Ser Arg Leu Ser
62 Lys Ala Tyr Pro Ser Pro Arg Gly Thr Pro Pro Ser Pro Thr Pro Ala
64 Asn Pro Glu Pro Thr Leu Pro Ala Asn Leu Ser Thr Arg Leu Gly Gln
                           55
66 Thr Ile Pro Leu Pro Phe Ala Tyr Trp Asn Gln Gln Gln Trp Arg Leu
68 Gly Ser Leu Pro Ser Gly Asp Ser Thr Glu Thr Gly Gly Cys Gln Ala
70 Trp Gly Ala Ala Ala Thr Glu Ile Pro Asp Phe Ala Ser Tyr Pro
              100
                                  105
72 Lys Asp Leu Arg Arg Phe Leu Leu Ser Ala Ala Cys Arg Ser Phe Pro
                              120
74 Gln Trp Leu Pro Gly Gly Gly Ser Gln Val Ser Ser Cys Ser Asp
                          135
      130
76 Thr Asp Val Pro Tyr Leu Leu Leu Ala Val Lys Ser Glu Pro Gly Arg
                      150
78 Phe Ala Glu Arg Gln Ala Val Arg Glu Thr Trp Gly Ser Pro Ala Pro
                  165
                                      170
80 Gly Ile Arg Leu Leu Phe Leu Leu Gly Ser Pro Val Gly Glu Ala Gly
                                  185
82 Pro Asp Leu Asp Ser Leu Val Ala Trp Glu Ser Arg Arg Tyr Ser Asp
         195
                              200
84 Leu Leu Trp Asp Phe Leu Asp Val Pro Phe Asn Gln Thr Leu Lys
                          215
86 Asp Leu Leu Leu Ala Trp Leu Gly Arg His Cys Pro Thr Val Ser
                                          235
                      230
88 Phe Val Leu Arg Ala Gln Asp Asp Ala Phe Val His Thr Pro Ala Leu
90 Leu Ala His Leu Arg Ala Leu Pro Pro Ala Ser Ala Arg Ser Leu Tyr
                                   265
92 Leu Gly Glu Val Phe Thr Gln Ala Met Pro Leu Arg Lys Pro Gly Gly
                               280
94 Pro Phe Tyr Val Pro Glu Ser Phe Phe Glu Gly Gly Tyr Pro Ala Tyr
                          295
96 Ala Ser Gly Gly Gly Tyr Val Ile Ala Gly Arg Leu Ala Pro Trp Leu
                      310
                                          315
98 Leu Arg Ala Ala Ala Arg Val Ala Pro Phe Pro Phe Glu Asp Val Tyr
                  325
                                      330
100 Thr Gly Leu Cys Ile Arg Ala Leu Gly Leu Val Pro Gln Ala His Pro
                                   345
               340
102 Gly Phe Leu Thr Ala Trp Pro Ala Asp Arg Thr Ala Asp His Cys Ala
                               360
104 Phe Arg Asn Leu Leu Leu Val Arg Pro Leu Gly Pro Gln Ala Ser Ile
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RAW SEQUENCE LISTING DATE: 03/14/2006
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Input Set : A:\10539834.txt

Output Set: N:\CRF4\03142006\J539834.raw

370 105 106 Arg Leu Trp Lys Gln Leu Gln Asp Pro Arg Leu Gln Cys 390 395 110 <210> SEQ ID NO: 3 111 <211> LENGTH: 31 112 <212> TYPE: DNA 113 <213> ORGANISM: Artificial Sequence 115 <220> FEATURE: 116 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR 118 <400> SEQUENCE: 3 119 ctcaagctta tgcgctgccc caagtgcctt c 31 121 <210> SEQ ID NO: 4 122 <211> LENGTH: 31 123 <212> TYPE: DNA 124 <213> ORGANISM: Artificial Sequence 126 <220> FEATURE: 127 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR 129 <400> SEQUENCE: 4 , thus 130 atogaattot dagdactgga goottgggto t 132 <210> SEQ ID NO: 5 133 <211> LENGTH: 20 134 <212> TYPE: DNA 135 <213> ORGANISM: Artificial Sequence 137 <220> FEATURE: 138 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for RT-PCR 140 <400> SEQUENCE: 5 141 gctgttggcc gtcaagtcag 20 143 <210> SEQ ID NO: 6 144 <211> LENGTH: 18 145 <212> TYPE: DNA 146 <213> ORGANISM: Artificial Sequence 148 <220> FEATURE: 149 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for RT-PCR 151 <400> SEQUENCE: 6 152 caggaagagc agccggat 18 154 <210> SEQ ID NO: 7 155 <211> LENGTH: 18 156 <212> TYPE: DNA 157 <213> ORGANISM: Artificial Sequence 159 <220> FEATURE: 160 <223> OTHER INFORMATION: Description of Artificial Sequence: probe for RT-PCR 162 <400> SEQUENCE: 7 163 cagaacgaca ggccgtga 18 165 <210> SEQ ID NO: 8 166 <211> LENGTH: 29 167 <212> TYPE: DNA 168 <213> ORGANISM: Artificial Sequence 170 <220> FEATURE:

171 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR

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PATENT APPLICATION: US/10/539,834 TIME: 11:06:03

Input Set : A:\10539834.txt

Output Set: N:\CRF4\03142006\J539834.raw

- 173 <400> SEQUENCE: 8
- 174 gccaagctta catccgagtc ccggctcag
- 176 <210> SEQ ID NO: 9
- 177 <211> LENGTH: 29
- 178 <212> TYPE: DNA
- 179 <213> ORGANISM: Artificial Sequence
- 181 <220> FEATURE:
- 182 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
- 184 <400> SEQUENCE: 9
- 185 qccaaqctta aggcctaccc cagccctcg
- 187 <210> SEQ ID NO: 10
- 188 <211> LENGTH: 28
- 189 <212> TYPE: DNA
- 190 <213> ORGANISM: Artificial Sequence
- 192 <220> FEATURE:
- 193 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR
- 195 <400> SEQUENCE: 10
- 196 cggaattctc agcactggag ccttgggt
- 198 <210> SEQ ID NO: 11
- 199 <211> LENGTH: 55
- 200 <212> TYPE: DNA
- 201 <213> ORGANISM: Artificial Sequence
- 203 <220> FEATURE:
- 204 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
- 206 <400> SEQUENCE: 11
- 207 ggggacaagt ttgtacaaaa aagcaggctt ccccagccct cggggcaccc cgcca 55
- 209 <210> SEQ ID NO: 12
- 210 <211> LENGTH: 54
- 211 <212> TYPE: DNA
- 212 <213> ORGANISM: Artificial Sequence
- 214 <220> FEATURE:
- 215 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR
- 217 <400> SEQUENCE: 12
- 218 qqqqaccact ttgtacaaga aagctgggtc tcagcactgg agccttgggt cttg 54
- 220 <210> SEQ ID NO: 13
- 221 <211> LENGTH: 29
- 222 <212> TYPE: DNA
- 223 <213> ORGANISM: Artificial Sequence
- 225 <220> FEATURE:
- 226 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
- 228 <400> SEQUENCE: 13
- 229 gccaagetta cateegagte eeggeteag
- 231 <210> SEQ ID NO: 14
- 232 <211> LENGTH: 29
- 233 <212> TYPE: DNA
- 234 <213> ORGANISM: Artificial Sequence
- 236 <220> FEATURE:
- 237 <223> OTHER INFORMATION: Description of Artificial Sequence: 5' primer for PCR
- 239 <400> SEQUENCE: 14

RAW SEQUENCE LISTING DATE: 03/14/2006 PATENT APPLICATION: US/10/539,834 TIME: 11:06:03

Input Set : A:\10539834.txt

Output Set: N:\CRF4\03142006\J539834.raw

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243 <211> LENGTH: 28
244 <212> TYPE: DNA
245 <213> ORGANISM: Artificial Sequence
247 <220> FEATURE:
248 <223> OTHER INFORMATION: Description of Artificial Sequence: 3' primer for PCR
250 <400> SEQUENCE: 15
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251 cggaattctc agcactggag ccttgggt
254 <210> SEQ ID NO: 16
255 <211> LENGTH: 372
256 <212> TYPE: PRT
257 <213 > ORGANISM: Homo sapiens
259 <400> SEQUENCE: 16
260 Thr Ser Glu Ser Arg Leu Ser Lys Ala Tyr Pro Ser Pro Arg Gly Thr
262 Pro Pro Ser Pro Thr Pro Ala Asn Pro Glu Pro Thr Leu Pro Ala Asn
.264 Leu Ser Thr Arg Leu Gly Gln Thr Ile Pro Leu Pro Phe Ala Tyr Trp 🐬
266 Asn Gln Gln Gln Trp Arg Leu Gly Ser Leu Pro Ser Gly Asp Ser Thr
268 Glu Thr Gly Gly Cys Gln Ala Trp Gly Ala Ala Ala Ala Thr Glu Ile
                         70
270 Pro Asp Phe Ala Ser Tyr Pro Lys Asp Leu Arg Arg Phe Leu Leu Ser
272 Ala Ala Cys Arg Ser Phe Pro Gln Trp Leu Pro Gly Gly Gly Ser
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                                    105
274 Gln Val Ser Ser Cys Ser Asp Thr Asp Val Pro Tyr Leu Leu Leu Ala
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          115
276 Val Lys Ser Glu Pro Gly Arg Phe Ala Glu Arg Gln Ala Val Arg Glu
                            135
278 Thr Trp Gly Ser Pro Ala Pro Gly Ile Arg Leu Leu Phe Leu Leu Gly
                                            155
280 Ser Pro Val Gly Glu Ala Gly Pro Asp Leu Asp Ser Leu Val Ala Trp
282 Glu Ser Arg Arg Tyr Ser Asp Leu Leu Leu Trp Asp Phe Leu Asp Val
                180
                                    185
284 Pro Phe Asn Gln Thr Leu Lys Asp Leu Leu Leu Ala Trp Leu Gly
                                200
286 Arg His Cys Pro Thr Val Ser Phe Val Leu Arg Ala Gln Asp Asp Ala
        210
                            215
288 Phe Val His Thr Pro Ala Leu Leu Ala His Leu Arg Ala Leu Pro Pro
                                            235
                        230
290 Ala Ser Ala Arg Ser Leu Tyr Leu Gly Glu Val Phe Thr Gln Ala Met
                    245
                                        250
292 Pro Leu Arg Lys Pro Gly Gly Pro Phe Tyr Val Pro Glu Ser Phe Phe
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294 Glu Gly Gly Tyr Pro Ala Tyr Ala Ser Gly Gly Tyr Val Ile Ala
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VERIFICATION SUMMARYDATE: 03/14/2006PATENT APPLICATION: US/10/539,834TIME: 11:06:04

Input Set : A:\10539834.txt

Output Set: N:\CRF4\03142006\J539834.raw

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date